

National 4 Homework 12

Questions 1, 3, 5 & 6 are Non Calculator

1. Calculate

a) $8 \cdot 65 + 2 \times (-3)$

b) 30% of £155

c) $0 \cdot 475 \times 200$

d) $568 \cdot 8 \div 9$

2. A train leaves Aberdeen at 1050 and arrives in Glasgow at 1320.

a) How long is the journey?

b) If the train travels at an average speed of 82 km/h, how far is the journey in km?



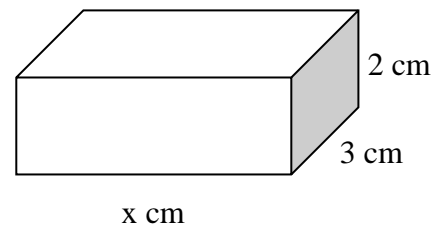
3. a) Write down an expression for the volume of this cuboid.

b) Calculate the volume of the cuboid when

i) $x = 4$

ii) $x = 5$

iii) $x = 10$



4. In a month, Lisa (who is a member of Active Gyms) attends 4 dance classes, 3 aerobics classes and a spinning class.



Class	Dance	Aerobics	Swim	Spinning
Member Cost	£2.20	£2.50	£1.75	£2.35
Non-Member Cost	£3.10	£3.50	£3.00	£3.00

a) How much will she have paid in total for these classes?

b) Hannah attends the same classes, but is not a member. She pays £25.90 in total that month. Membership of Active Gyms costs £10 a month.

Should Hannah become a member of Active Gyms? Give a reason for your answer.

5. Multiply out and simplify;

a) $8(3a - 1) + 3(2a + 5)$

b) $4(9x + 4) - 3(2x + 1)$

c) $5(2y - 5) - 3(2 + y)$.

6. Factorise

a) $14y + 12$

b) $25p - 10q$

c) $10x + 16y$

d) $8x - 24$

e) $9a - 12b$

f) $27 - 18q$

g) $10z - 50$

h) $45c - 81$.